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| EXAMINER | |
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| CORBETT, JOHN M | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/524,341 | GOTO ET AL. | |
| | Examiner | Art Unit | |
| | JOHN M. CORBETT | 2882 | |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _06 November 2008_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1 and 3-9_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 and 3-9_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _03 October 2008_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3 October 2008 has been entered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the term "the difference in the absolute values of the cone angles at both ends of the projection data phase range is reduced" is a relative term which renders the claim indefinite. The term "reduced" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, the claim is indefinite. Claims 3-9 are rejected by virtue of their dependency.

With respect to claim 3, it is unclear to the Examiner as to the limiting meaning of the claimed phrase "the projection data phase range used is determined so as to be the”. The claim appears to be incomplete. Claims 4-6 are rejected by virtue of their dependency.

With respect to claims 3-6, the claims are indefinite insofar as they are dependent upon cancelled claim 2.

With respect to claims 5, 6 and 7, the limitation “rectangular or hexagonal display pixel” is unclear insofar as the meaning is not understood. Therefore the claims are rejected for being indefinite. Claims 8 and 9 are rejected by virtue of their dependency.

With respect to claim 8, the claim on line 3 recites the limitation "said square image". There is insufficient antecedent basis for this limitation in the claim.

With respect to claim 9, it is unclear to the Examiner as to the limiting meaning of the claimed phrase "remains the same” since it is unclear as to what is remaining the same. Therefore, the claim is indefinite.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Grass et al. ("Angular weighted hybrid cone-beam CT reconstruction for circular trajectories", 2001, Physics in Medicine and Biology, Volume 46, Pages 1596-1610) in view of Eisenberg et al. (US 2003/0128801 A1).

With respect to claim 1, Grass et al. discloses an apparatus comprising:

a radiation source and a radiation detector arranged opposite to each other (Abstract), between which an object is provided (Abstract), said radiation source and radiation detector turning around said object (Abstract), radiation irradiated from said radiation source and passing through the examinee being detected using said radiation detector (Abstract); and

necessarily a reconfiguration means (Pages 1601-1609, Section 4 Results and Figures 4-9) for creating a three-dimensional tomographic image in a region in concern of the object from the detected projection data (Figures 1, 3 and 6 and Table 1, voxels), said reconfiguration means

determines for each voxel a projection data phase range as an angle between 180 degrees and 360 degrees (Page 1598, lines 27-29 and Page 1599, lines 4-8),

superimposes a reconfiguration filter (Page 1598, lines 4-5),

assigns weights to data (Title) of the same phase or opposite phase for each phase for this projection data phase range (Page 1596, lines 1-15, Page 1597, line 7 – Page 1598, line 5 and Page 1601, lines 30-35) and

three-dimension back projects this filter-processed projection data over said projection data phase range determined for each voxel along the irradiation trace of the radiation beam (Page 1597, lines 11-27),

when determining said projection data phase range, a projection data phase range is determined so that the difference in the absolute values of cone angles at both ends of the projection data phase range used is reduced (Page 1599, lines 12-13).

Grass et al. fails to explicitly disclose a bed with an examinee placed thereon is provided (Figure 2), said bed which can be moved with respect to this go-around axis.

Eisenberg et al. teaches a bed (22) with an examinee placed thereon is provided, said bed which can be moved with respect to this go-around axis (Paragraph 106 and Figure 23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Grass et al. to include the movable bed of Eisenberg et al., since a person would have been motivated to make such a modification to improve imaging by increasing the volume that is imaged by producing contiguous data sets (Paragraph 106 and Figure 23) as taught by Eisenberg et al.

With respect to claim 3, Grass et al. further discloses the projection data phase range used is determined so as to be the, does not distinguish over the prior art reference Grass et al., since claim 3 does not further limit independent claim 1.

With respect to claim 7, Grass et al. further discloses associating means is provided (system necessary has computer) for associating pixel intervals in the body axis direction of the

image using rectangular or hexagonal display pixels with the relative moving speed between the object and said radiation source in the go-around axis direction.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grass et al. in view of Eisenberg et al. as applied to claim 1 above, and further in view of Suparta ("Focusing Computed Tomography", 2000, 15th WCNDT Roma 2000, available at http://www.ndt.net/article/wcndt00/papers/idn142/idn142.htm).

With respect to claim 4, Grass et al. as modified above suggests the apparatus as recited above.

Grass et al. further discloses projection data phase range (Page 1596, lines 1-15, Page 1597, line 7 – Page 1598, line 5 and Page 1601, lines 30-35).

Grass et al. fails to explicitly disclose either 270 degrees or 360 degrees.

Suparta teaches reconstruction with different fan angle widths (Page 3, lines 1-2 and Figures 3-5, fan angle widths of $45^{o}$ and $60^{o}$).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the apparatus of Grass et al. as modified above the fan beam angle of Suparta, since a person would have been motivated to make such a modification to improve imaging by selecting a fan beam width large enough to image the entire object thereby reducing imaging time (Page 4, Concluding Remarks) as implied by Suparta.

At the time the invention was made, it would have been an obvious matter of design choice for a person of ordinary skill in the art to select a geometric configuration to include a fan

beam width (to include 90°), since a person would have been motivated to have an apparatus that provided projection data that was not truncated in the fan angle direction thereby reducing scanning times and simplifying reconstruction calculations.

Note: Reconstruction requires 180° plus fan beam angle to satisfy data sufficiency conditions (180° + 90° = 270°).

5. Claims 1, 3-4 and 7 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Taguchi (US 5,825,842) in view of Grass et al.

With respect to claim 1, Taguchi discloses an apparatus (Figure 1) comprising:

a radiation source (3) and a radiation detector (5) arranged opposite to each other (Figure 1), between which a bed (6) with an examinee placed thereon is provided (Col. 6, line 57), said radiation source and radiation detector turning around said bed which can be moved with respect to this go-around axis, radiation irradiated from said radiation source and passing through the examinee being detected using said radiation detector (Col. 6, lines 55-63); and

reconfiguration means (12) for creating a three-dimensional tomographic image in a region in concern of the object from the detected projection data (Col. 7, lines 22-29), said reconfiguration means

determines, for each voxel, a projection data phase range (Col. 7, lines 22-25) as an angle between 180 and 360 degrees (Col. 2, line 15-17, Col. 14, line 20-24, Col. 15, lines 42-48 and Figures 12a and 12b),

assigns weights to data of the same phase or opposite phase for each phase for this projection data phase range (Col. 10, lines 5-31) and

three-dimension back projects this projection data over said projection data phase range determined for each voxel along the irradiation trace of the radiation beam (Col. 7, lines 12-29).

Taguchi fails to explicitly disclose superimposes a reconfiguration filter and when determining said projection data phase range, a projection data phase range is determined so that the difference in the absolute values of cone angles at both ends of the projection data phase range used is reduced.

Grass et al. teaches superimposes a reconfiguration filter (Page 1598, lines 4-5)and when determining said projection data phase range, a projection data phase range is determined so that the difference in the absolute values of cone angles at both ends of the projection data phase range used is reduced (Page 1599, lines 12-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Taguchi to include the filter of Grass et al., since a person would have been motivated to make such a modification to improve imaging by filtering out high-frequencies as is well known in the art (See Kudo et al. cited in prior office action, Page 78, Col. 2, lines 21-33).

Grass et al. further teaches when determining said projection data phase range, a projection data phase range is determined so that the difference in the absolute values of cone angles at both ends of the projection data phase range used is reduced (Page 1599, lines 7-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the apparatus of Taguchi as modified above the range of Grass et al., since a person would have been motivated to make such a modification to improve imaging by minimizing cone-beam artifacts (Page 1599, line 14) as taught by Grass et al.

With respect to claim 3, Taguchi further discloses the projection data phase range used is determined so as to be the, does not distinguish over the prior art reference Taguchi, since claim 3 does not further limit independent claim 1.

With respect to claim 4, Taguchi further discloses either 270 degrees or 360 degrees (Col. 2, lines 15-17, Col. 14, lines 19-24 and Col. 15, lines 42-48 and Figures 12a and 12b).

With respect to claim 7, Taguchi further discloses associating means (apparatus necessarily has a computer) is provided for associating pixel intervals in the body axis direction of the image using rectangular or hexagonal display pixels with the relative moving speed between the object and said radiation source in the go-around axis direction.

6. Claims 5-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Grass et al. as applied to claims 1 and 7 above, and further in view of Lin (US 5,047,931).

With respect to claim 5, Taguchi as modified above suggests the apparatus as recited above.

Taguchi further discloses projection data whose number of images taken per rotation (Col. 6, line 39 - Col. 7, line 29).

Taguchi fails to disclose a multiple of the number of sides C of a rectangular or hexagonal display pixel is acquired, and

said reconfiguration means comprises

back projection means for superimposing said reconfiguration filter on this projection data,

grouping data at the same channel position and having projection phases in the go-around direction shifting by 2Nπ/C (N=1, 2, 3, . . . . . . ) radians at a time and

performing back projection to a square image array group by group.

Grass et al. further teaches said reconfiguration means necessarily comprises back projection means for superimposing said reconfiguration filter on this projection data (Page 1599, lines 7-13, a filtered backprojection method as noted above).

Lin teaches a multiple of the number of sides C of a rectangular or hexagonal display pixel is acquired, and

grouping data at the same channel position and having projection phases in the go-around direction shifting by 2Nπ/C (N=1, 2, 3, . . . . . . ) radians at a time and

performing back projection to a square image array group by group (Abstract, Col. 6, line 57 – Col. 7, line 51 and Figures 2-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the apparatus of Taguchi as modified above the grouping of Lin, since a person would have been motivated to make such a modification to improve imaging by reducing computational times (Col. 9, lines 3-10) as taught by Lin.

With respect to claim 6, Taguchi as modified above suggests the apparatus as recited above.

Taguchi fails to disclose said reconfiguration means converts the projection data obtained to data including fan beam data and parallel beam data whose number of images taken per rotation is a multiple of the number of sides C of a rectangular or hexagonal display pixel,

superimposes the filter on this projection data,

groups data at the same channel position and having projection phases in the go-around direction shifting by $2N\pi/C$ (N=1, 2, 3, . . . . . . ) radians at a time and

performs back projection to a square image array group by group.

Grass et al. further teaches said reconfiguration means necessarily comprises back projection means for superimposing said reconfiguration filter on this projection data (Page 1599, lines 7-13, a filtered backprojection method as noted above).

Lin teaches converts the projection data obtained to data including fan beam data and parallel beam data whose number of images taken per rotation is a multiple of the number of sides C of a rectangular or hexagonal display pixel,

superimposes the filter on this projection data,

groups data at the same channel position and having projection phases in the go-around direction shifting by $2N\pi/C$ (N=1, 2, 3, . . . . . . ) radians at a time and

performs back projection to a square image array group by group(Abstract, Col. 6, line 57 – Col. 7, line 51 and Figures 2-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the apparatus of Taguchi as modified above the conversion and grouping of Lin, since a person would have been motivated to make such a modification to improve imaging by reducing computational times (Col. 9, lines 3-10) as taught by Lin.

With respect to claim 8, Taguchi as modified above suggests the apparatus as recited above.

Taguchi further discloses the relationship between pixel interval rpitch in the body axis direction of a image and the relative moving speed in the go-around axis direction of the object and said radiation source is necessarily expressed by 2 * N * rpitch (N=1, 2, 3 . . . . . . ) (Abstract and Col. 13, lines 23-35).

Taguchi fails to explicitly disclose square.

Lin teaches square (Col. 10, lines 27-42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the apparatus of Taguchi as modified above the square symmetry of Lin, since a person would have been motivated to make such a modification to improve imaging by reducing computational times (Col. 9, lines 3-10) as taught by Lin.

With respect to claim 9, Taguchi further discloses at the phase of Nπ (N=1, 2, 3, . . . . . . ) radians of the radiation source, the position on the radiation detector at which the beam passing through a voxel I (x, y, z) whose body axis direction position is Z millimeters and a voxel I (-x, -y, N * (J/2) + Z) whose body axis direction position is N * (J/2) + Z millimeters intersects remains the same.

Note: The Examiner takes the position that the configuration required by the claimed equation is necessarily met by the geometrical configuration of the invention of Polkus et al.

7. Claims 1 and 4-7 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Hsieh (2003/0073893) in view of Grass et al.

With respect to claim 1, Hsieh (‘893) discloses an apparatus comprising:

a radiation source (12) and a radiation detector (20) arranged opposite to each other (Figure 3), between which a bed (39) with an examinee (18) placed thereon is provided, said radiation source and radiation detector turning around said bed (Figure 3) which can be moved (37) with respect to this go-around axis, radiation irradiated from said radiation source and passing through the examinee being detected using said radiation detector (Paragraph 23); and

reconfiguration means (40) for creating a three-dimensional tomographic image (Paragraphs 30-31, Feldkamp) in a region in concern of the object from the detected projection data (74), said reconfiguration means

determines, for each voxel, a projection data phase range as an angle between 180 and 360 degrees (Paragraph 27),

superimposes a reconfiguration filter (Paragraph 28),

assigns weights to data of the same phase or opposite phase for each phase for this projection data phase range (Paragraph 28) and

three-dimension back projects this filter-processed projection data over said projection data phase range determined for each voxel along the irradiation trace of the radiation beam (Paragraph 28).

Hsieh (‘893) fails to disclose when determining said projection data phase range, a projection data phase range is determined so that the difference in the absolute values of cone angles at both ends of the projection data phase range used is reduced

Grass et al. teaches when determining said projection data phase range, a projection data phase range is determined so that the difference in the absolute values of cone angles at both ends of the projection data phase range used is reduced (Page 1599, lines 12-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Taguchi to include the range of Grass et al., since a person would have been motivated to make such a modification to improve imaging by minimizing cone-beam artifacts (Page 1599, line 14) as taught by Grass et al.

With respect to claim 3, Hsieh further discloses the projection data phase range used is determined so as to be the, does not distinguish over the prior art reference Taguchi, since claim 3 does not further limit independent claim 1.

With respect to claim 4, Hsieh (‘893) further teaches said projection data phase range is either 270 degrees or 360 degrees (Paragraph 32).

With respect to claim 5, Hsieh (‘893) further teaches projection data whose number of images taken per rotation is a multiple of the number of sides C of a polygonal display pixel is acquired (Paragraphs 23 and 26, images taken), and

said reconfiguration means comprises

back projection means (40) for superimposing said reconfiguration filter on this projection data,

grouping data at the same channel position and having projection phases in the go-around direction shifting by $2N\pi/C$ (N=1, 2, 3, . . . . . . ) radians at a time (Paragraph 27) and

performing back projection to a square image array group by group (Paragraphs 27-28).

With respect to claim 6, Hsieh (‘893) as modified above suggests the apparatus as recited above.

Hsieh (‘893) further teaches said reconfiguration means obtains the projection data whose number of images taken per rotation is a multiple of the number of sides C of a rectangular or hexagonal display pixels (Paragraphs 23 and 26, data obtained),

superimposes the filter on this projection data (Paragraph 28),

groups data at the same channel position and having projection phases in the go-around direction shifting by $2N\pi/C$ (N=1, 2, 3, . . . . . . ) radians at a time (Paragraph 27) and

performs back projection to a square image array group by group (Paragraphs 27-28).

Hsieh (‘893) fails to teach converts the projection data obtained to data including fan beam data and parallel beam data.

Grass et al. further teaches converts the projection data obtained to data including fan beam data and parallel beam data (Page 1596, lines 1-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the apparatus of Hsieh (‘893) as modified above the converting of Grass et al., since a person would have been motivated to make such a modification to improve the reconstruction process by improving computational efficiency (Page 1595, lines 7-12) as taught by Grass et al.

With respect to claim 7, Hsieh (‘893) further discloses associating means (apparatus necessarily has a computer) is provided for associating pixel intervals in the body axis direction of the image using rectangular or hexagonal display pixels with the relative moving speed between the object and said radiation source in the go-around axis direction.

***Response to Arguments***

8. Applicant's arguments with respect to at least claim 1 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Turbell ("Cone-Beam Reconstruction Using Filtered Backprojection", February 2001, Linkoping Studies in Science and Technology dissertation No. 672) discloses the T-FDK and HT-FDK as three-dimensional backprojection methods (Page 8, Table 1.2, and Pages 45-47, Section 3.3.2) and a smooth window weighting of the data (Pages 47-50, Section 3.3.3).

Grass et al. ("3D cone-beam CT reconstruction for circular trajectories", 2000, Physics in Medicine and Biology, Pages 329-347) discloses a hybrid Feldkamp reconstruction method where 360° of data is used for some voxels for which this data is available and for other voxels the voxel position for each voxel and a projection angle-dependent angular weighting function is used for reconstructing the voxel (Pages 340-346, Sections 4 and 5). A parallel rebinning method is disclosed in which data of the same phase is regrouped into parallel projections (Abstract and Figure 1).

Tam (5,390,112) discloses a field of view such as a cylinder which can be radially centered on a predetermined axis encloses an object to be imaged or a subsection of a workpiece which exceeds the size of the field of view. The object may be a human or animal patient or portion thereof which is to be imaged for medical purposes and the workpiece being analyzed for industrial purposes. Tam further discloses it will be understood that the relative motion between

source and the object may be accomplished by: moving source while the object in field of view remains stationary, moving the object while source is stationary, or by moving both the object and source at the same time. Further, in medical applications where the object is a patient or part of a patient, source 14 is usually moved while the patient is stationary. In industrial applications where the object may be part or all of a workpiece, the workpiece is usually moved while the source 14 is maintained stationary (Col. 4, lines 32-64).

Suparta ("Focusing Computed Tomography" 2000, 15th WCNDT Roma 2000, available at http://www.ndt.net/article/wcndt00/papers/idn143/idn143.htm) discloses a computer tomography system and method utilizing a focus centered detector with two exemplary fan beam widths of 45 $^{o}$ and 60$^{o}$ (Figure 1 and 3-4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. CORBETT whose telephone number is (571)272-8284. The examiner can normally be reached on M-F 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. C./
Examiner, Art Unit 2882

/Edward J Glick/
Supervisory Patent Examiner, Art Unit 2882